State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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May 12, 2000

Stephen E. Flechner, President and CEO
North Lily Mining Company
1800 Glenarm Place Suite 210
Denver, Colorado 80202

Re : Review of Reclamation/Closure Implementation and Excess Fluid Management Plan, North Lily Mining Company, Tintic Project, M/023/007, Juab County, Utah

Dear Mr. Flechner:

On April 18, 2000, the Division received the proposals for Excess Fluid Management and Reclamation Closure Implementation Plans from JBR Environmental Consultants for the Tintic Project. Our review is being sent independently of the review being performed by the Division of Water Quality (DWQ) staff. We have reviewed the plans and have developed the following comments and/or clarifications that should be addressed.

Reclamation/Closure Implementation Plan

Enhanced Evaporation System

The perimeter solution collection system should be restored from the southern end of the West ditch to the pregnant solution pond. Replacement of the leach pad under-drain system in this ditch will be necessary before resloping of the pad occurs. The requirement for the placement of this under-drain was stated in an August 23, 1996 document from the Division of Water Quality.

Evaluation of Former Land Application Areas

At the present time Lynn Kunzler, Division Senior Reclamation Specialist and Botanist, is scheduled to review and comment on these areas. The added cost of contracting an additional person to independently evaluate these areas may not be necessary.

Post-Closure Solution Management System

JBR states that bench-scale studies of a passive anoxic bioreactor conducted on behalf of North Lily Mining did not demonstrate that elevated TDS levels could be removed by this system. The Division has not had an opportunity to review this study. Although initial bench-scale tests of this system for TDS

reduction were unsuccessful, this may not be a valid reason to completely eliminate solution treatment from the closure plan. At this time, we have not reviewed any studies documenting soil attenuation of metals from solutions. Please submit results of the bench-scale anoxic bioreactor and the supportive soil attenuation studies for our evaluation.

Excess Fluid Management Plan

Proposed Plan Concepts for Fluid Management

JBR states that the pad drain-down is anticipated to remain at a relatively high rate through the remainder of 2000. Please define "a relatively high rate." If the drain-down rate remains at an elevated level (+ 16 gpm, in-pond evaporation system capacity), then elimination of the pad evaporation system by July-August 2000, would not be an option until the return flow remains below this rate for an reasonable amount of time. Re-establishment of the solution under-drain system in the West ditch will be necessary before pad regrading can begin.

Assessment of Pump Capacity

The use of a floating submersible pump may prove to be a problem given the amount of eroded pad material and sediment presently residing in the bottom of the pregnant solution pond. As the solution level lowers, these sediments could be drawn into the return flow and restrict or plug the solution distribution system components.

The existing pump does not have the capability of draining solutions from the overflow pond because there is no piping system connected to this pond. Rental of a small gasoline powered trash pump is recommended to pump the water from the overflow pond into the barren pond which is presently connected to the pumping system.

The statement, "installation of a flow meter in the current solution return line to gauge the application rate that has been achieved in the recent past," is not understood. Please describe where this solution return line is. How will the line be able to gauge past application rates? Presently, all solutions returning from the heap drain into a perimeter ditch then flow into the pregnant solution pond.

Pad Solution Channel and Pregnant Pond Liner Repair

The statement, that repairs to the solution channel by North Lily or JBR temporary staff will be made using methods previously used by North Lily personnel is not acceptable. Failure of several patches that were previously applied by North Lily demonstrates that manufacturer's recommendations have not been followed when applying patches. To assure that "Discharge Minimization Technology" is maintained in the solution channels and ponds, extra care should be taken when cleaning and preparing the damaged liner to ensure that new patches adhere properly.

During a recent (May 9, 2000) site inspection by DOGM and DWQ staff, we were very encouraged and pleased to see that some of the projected closure work was underway. Thank you for your prompt reply in providing us with the revised Closure and Reclamation Schedule which we received yesterday. We are presently reviewing this document and will be responding accordingly as soon as possible.

We look forward to talking with you further during our upcoming May 16th joint conference call. We will call you, your consultant, and DWQ at 9:00 a.m. to discuss the progress of ongoing closure activities and the status of the stipulated order that will be forthcoming from the Division. Thank you for your cooperation and efforts in working towards final closure of this mining facility.

Sincerely,

D. Wayne Hedberg
Permit Supervisor
Minerals Reclamation Program

jb
cc: Robert Bayer, JBR Consultants
Dennis Frederick, DWQ
Mary Ann Wright, DOGM
Doug Jensen, DOGM
M23-07.JBRproposal